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EXAMINER

TANG, KENNETH

ART UNIT	PAPER NUMBER
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2127

DATE MAILED: 01/29/2004

14

Please find below and/or attached an Office communication concerning this application or proceeding.

File

Office Action Summary	Applicati n No.		Applicant(s)	
	09/484,865		DYKINS ET AL.	
	Examin r		Art Unit	
	Kenneth Tang		2127	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 1-4, 7-16 and 19-25
- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 1-4, 7-16 and 19-25
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This non-final action is in response to paper number 12, Amendment D, which was received 1/12/04. Claims ^{1-4, 7-16 and 19-25}~~1-25~~ are presented for examination.

Claim Objections

2. Claim 1 is objected to because of the following informalities: "therebetween" is not a valid word. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 3-4, 9-11, 13, 15, 16, 21-23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable by Grimsrud (US 6,546,437 B1) in view of Hosaka et al. (hereinafter Hosaka) (US 5,896,292).**
4. Referring to claim 1, Hosaka teaches a method for processing microdevices comprising:
- providing a computer system having processing information related to the microdevices as a task ("FIG. 1 is a diagram of a legacy computer coupled to a legacy peripheral.", col. 1, lines 59-60);

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- providing a legacy processing system (*"FIG. 1 is a diagram of a legacy computer coupled to a legacy peripheral.", col. 1, lines 59-60*);
- providing a non-legacy processing system (*"FIG. 5 is a diagram of a non-legacy computer coupled to a non-legacy peripheral", col. 1, lines 66-67*);
- providing the task from the computer system to the legacy processing system with constant interaction there between (*"FIG. 1 is a diagram of a legacy computer coupled to a legacy peripheral.", col. 1, lines 59-60*);
- providing the task from the computer system to the non-legacy processing system for performing the task by the non legacy processing system independent of the computer system (*"The non-legacy computer 174 can include a similar processor 102 and memory 104 as legacy computers 100 (FIG. 1). However, to implement one of the proposed computer/peripheral schemes, the memory 104 of the non-legacy computer 174 stores instructions for non-legacy BIOS 166 and, after being uploaded from the peripheral 176, peripheral-specific instructions 168 for handling functions traditionally handled by peripherals in the older computer/peripheral schemes. These instructions 168 can include portions of the peripheral control logic 170 and a portion of the peripheral buffer memory 172 traditionally stored and executed by the peripheral." Col. 4, lines 3-14*);
- developing return non-legacy information resulting from the non-legacy processing system using the task (*It is inherent in Grimsrud that there are return information resulting from the non-legacy processing system to the peripheral because they are coupled together. "FIG. 5 is a diagram of a non-legacy computer coupled to a non-legacy peripheral", col. 1, lines 66-67" and "The non-legacy computer 174 can include*

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a similar processor 102 and memory 104 as legacy computers 100 (FIG. 1). However, to implement one of the proposed computer/peripheral schemes, the memory 104 of the non-legacy computer 174 stores instructions for non-legacy BIOS 166 and, after being uploaded from the peripheral 176, peripheral-specific instructions 168 for handling functions traditionally handled by peripherals in the older computer/peripheral schemes. These instructions 168 can include portions of the peripheral control logic 170 and a portion of the peripheral buffer memory 172 traditionally stored and executed by the peripheral.” Col. 4, lines 3-14 ;

- *returning the return non-legacy information to the computer system (It is inherent in Grimsrud that there are return information resulting from peripheral to the non-legacy processing system because they are coupled together. “FIG. 5 is a diagram of a non-legacy computer coupled to a non-legacy peripheral”, col. 1, lines 66-67” and “The non-legacy computer 174 can include a similar processor 102 and memory 104 as legacy computers 100 (FIG. 1). However, to implement one of the proposed computer/peripheral schemes, the memory 104 of the non-legacy computer 174 stores instructions for non-legacy BIOS 166 and, after being uploaded from the peripheral 176, peripheral-specific instructions 168 for handling functions traditionally handled by peripherals in the older computer/peripheral schemes. These instructions 168 can include portions of the peripheral control logic 170 and a portion of the peripheral buffer memory 172 traditionally stored and executed by the peripheral.” Col. 4, lines 3-14);*

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- providing processing system process-specific parameters (*"the legacy BIOS 106 can scan I/O ports to detect coupled peripherals", device parameters table 108, col. 3, lines 11-19*);
- controlling the handling of the microdevices (*"the legacy BIOS 106 can scan I/O ports to detect coupled peripherals", col. 3, lines 11-12*);
- processing the microdevices (*"instructions that cause a processor to transmit a request for information to a peripheral", col. 1, lines 43-44*);
- providing a number of microdevices (*"the legacy BIOS 106 can scan I/O ports to detect coupled peripherals", col. 3, lines 11-12*);
- determining the number of microdevices processed (*"the legacy BIOS 106 can scan I/O ports to detect coupled peripherals", col. 3, lines 11-12*);
- determining the number of microdevices handled (*"the legacy BIOS 106 can scan I/O ports to detect coupled peripherals", device parameters table 108, col. 3, lines 11-19*);
- developing statistics from the number of microdevices processed and handled (*device parameters table 108, col. 3, line 19*).

5. Grimsrud teaches the control and processing of legacy and non-legacy processing systems with their respective peripheral devices but fails to explicitly teach having parameters to control the systems. However, Hosaka teaches the steps of:

- providing processing system setup and shutdown parameters (*"parameters", col. 19, line 65, and "input/output control device", "managing start-up/shut-down", col. 4, lines 17-20*);

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- providing processing system process-specific parameters (*"parameters"*, col. 19, line 65, and *"input/output control device"*, col. 4, lines 17-20, and *"specific setting start-up command"*, col. 29, lines 32-35);
- processing system setup parameters to the processing system (*"parameters"*, col. 19, line 65, and *"input/output control device"*, col. 4, lines 17-20, and *"data is transmitted from the control computer 702 to the monitor computer 701"*, col. 12, lines 37-40);
- providing the processing system shutdown parameters simultaneously with the processing system setup parameters (*"parameters"*, col. 19, line 65, and *"input/output control device"*, *"managing start-up/shut-down"*, col. 4, lines 17-20);
- providing the number of processed microdevices to be output from a given processing system (*"parameters"*, col. 19, line 65, and *"input/output control device"*, col. 4, lines 17-20, and *"specific setting start-up command"*, col. 29, lines 32-35);
- providing processing system process-specific parameters to the processing system (*"parameters"*, col. 19, line 65, and *"input/output control device"*, col. 4, lines 17-20, and *"specific setting start-up command"*, col. 29, lines 32-35, and *"data is transmitted from the control computer 702 to the monitor computer 701"*, col. 12, lines 37-40);

6. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of having an administrator mode to control configuration parameters of the system for the reason of increasing the control of the system by being able to alter settings and controls.

7. Referring to claims 3, Grimsrud teaches the steps of:

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- providing a microdevice programming system in the non-legacy processing system, the microdevice programming system standing alone from the computer system;
- using the processing information for the task in the non-legacy processing system independent from the computer system;
- returning return information from the non-legacy processing system using portable medium to the computer system;
- storing the return information in the computer system (*"Computers often use peripheral devices such as hard disk drives and CD-ROM drives for data storage. A peripheral may include what amounts to a small computer of its own. This small embedded computer can control a variety of electronic and mechanical functions involved in data storage and retrieval such as controlling the positioning of a disk head that reads and writes data from a hard disk. The small peripheral computer can also handle software-oriented functions such as data caching and computer/peripheral communication."*, col. 1, lines 9-18).

Hosaka teaches having a mode to operate tasks being executed to a program in a control computer (*"control computer", "apparatus mode", "operating state", "tasks being executed, processes and program line, etc."* col. 12, lines 30-40).

8. Referring to claims 4 and 16, Grimsrud storing processing information of microdevices for legacy and non-legacy systems (as described in the rejection of claim 1). Hosaka teaches the following:

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- Providing an administrator mode (*It is inherent that Hosaka's "administrator mode" occurs when varying the inputs/outputs.*);
- Providing programming information related to the task in the administrator mode (*"input/output units 703-706", col. 11, lines 4-10, and "program", "assigned", "data input", "computer", col. 4, lines 29-33, "transmitting the control information", see Abstract*). *It is inherent that Hosaka's "administrator mode" occurs when varying the inputs/outputs.*
- editing the processing and programming information related to the task in the administrator mode (*"input/output units 703-706", col. 11, lines 4-10, and "controlling the processes of operation", "monitor computer has an editor program", col. 4, line 11, "transmitting the control information", see Abstract*);

9. Referring to claims 9, Grimsrud teaches processing peripheral devices of non-legacy systems but fails to explicitly teach using setup parameters and format information to process with the non-legacy systems. Hosaka teaches the steps of:

- providing microdevice information ("sequence flow information, "control computer 702", col. 52, lines 47-55);
- providing processing system setup parameters ("parameters", col. 19, line 65, and "input/output control device", col. 4, lines 17-20). It is inherent that the setup parameters are contained in the software that controls the input/output control device because these parameters are necessary to run the process;

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- providing format information related to the (“Numeral 4506 denotes a handshake register for data”, “special-purpose language program is created and compiled by the monitor computer 701 and sent to the control computer 701”, “reverse compilation”, col. 12, lines 44-51, and “off-line”, col. 12, line 32).
- inputting the number of processed microdevices to be output from the processing system (“parameters”, col. 19, line 65, and “input/output control device”, col. 4, lines 17-20, and “specific setting start-up command”, col. 29, lines 32-35); It is inherent that the number of processed microdevices to be output is determined and inputted either manually or through automation and is inputted using the input/output control device.
- providing the processing system setup parameters and format to the processing system (“parameters”, col. 19, line 65, and “input/output control device”, col. 4, lines 17-20, and “Numeral 4506 denotes a handshake register for data”, “special-purpose language program is created and compiled by the monitor computer 701 and sent to the control computer 701”, “reverse compilation”, col. 12, lines 44-51, and “off-line”, col. 12, line 32).
- transferring the microdevice information from the computer to the processing system (“data is transmitted from the control computer 702 to the monitor computer 701”, col. 12, lines 36-40);
- transferring the processing system format from the computer to the processing system (“data is transmitted from the control computer 702 to the monitor computer 701”, col. 12, lines 36-40, and “input/output control device”, col. 4, lines 17-20, and “Numeral 4506 denotes a handshake register for data”, “special-purpose language program is created and

compiled by the monitor computer 701 and sent to the control computer 701”, “reverse compilation”, col. 12, lines 44-51, and “off-line”, col. 12, line 32);

- obtaining information from the processing of the microdevices (“dual-port memory 4501 is capable of reading and writing in two directions”, col. 12, lines 26-27). It is inherent that information can be obtained or extracted from the dual-port memory.
- transferring the information from the processing of the microdevices (“dual-port memory 4501 is capable of reading and writing in two directions”, col. 12, lines 26-27, and “data is transmitted from the control computer 702 to the monitor computer 701”, col. 12, lines 36-40, and “input/output control device”, col. 4, lines 17-20, and “Numeral 4506 denotes a handshake register for data”, “special-purpose language program is created and compiled by the monitor computer 701 and sent to the control computer 701”, “reverse compilation”, col. 12, lines 44-51, and “off-line”, col. 12, line 32).

10. Referring to claims 10 and 22, Hosaka teaches the step of:

- transferring includes the use of a portable memory medium (*“an external storage device 6503, col. 8, lines 40-49, see Fig 65).*

11. Referring to claims 11 and 23, Hosaka teaches the step of:

- transferring includes the use of a direct communication connection (*“data communication device 6508 capable of communicating information without impeding the operation of the monitor computer 6504 and a control computer 6509”, col. 8, lines 45-48).*

12. Referring to claim 13, it is rejected for the same reasons as stated in the rejection of claim

1. Grimsrud teaches a programmer/feeder system in that it uses a computer to program and process the instructions for legacy and non-legacy systems to their respective peripheral devices.

13. Referring to claim 15, it is rejected for the same reasons as stated in the rejection of claim 3.

14. Referring to claim 21, it is rejected for the same reasons as stated in the rejection of claim 9.

15. Referring to claim 25, Hosaka teaches:

- providing information for affecting changes selected from a group consisting of software (*“software having different functions such as control program development, control program debugging or data analysis”*, col 2, lines 39-44), firmware (*“the data transmission means has a dual-port memory capable of real-time reading/writing to/from all or part of a memory provided within the control computer or monitor computer”*, col 3, lines 50-54), and a combination thereof by using the portable memory medium (*“an external storage device 6603”*, see Fig. 66, col. 1, lines 26-31).

16. Claims 2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grimsrud (US 6,546,437 B1) in view of Hosaka et al. (hereinafter Hosaka) (US 5,896,292), and further in view of Tavallaei (US 6,360,291 B1).

17. Referring to claim 2, Grimsrud teaches (as shown from the rejection of claim 1):

- providing a microdevice programming system in the legacy processing system;
- the microdevices in the microdevice programming system;
- performing the task by the processing system dependent on the computer system.

Grimsrud fails to explicitly teach having an on-line connection to receive processing information between the systems and the peripheral devices. However, Tavallaei teaches using an local area network (LAN), such as Ethernet to provide an on-line connection to communicate and transfer data (*"Local Area Network (LAN) ports", "LAN controllers", "Ethernet controllers", "communicate and transfer data", col. 1, lines 12-27, and "legacy", "non-legacy", col. 7, lines 22-31*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of having an on-line connection to the existing method for the reason of increasing the communication abilities. "As known in the art, peripheral devices may be conveniently categorized into several classes based on their functionality. For example, the "block storage device" class of peripherals may include hard disk drives, whereas the "Local Area Network (LAN) ports" class may include LAN controllers, such as, for example, Ethernet controllers. The various components of a computer system communicate and transfer data using a bus system which is connected to the communicating components" (*col. 1, lines 19-27*).

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18. Referring to claim 14, it is rejected for the same reasons as stated in the rejection of claim 2.

Claims 7, 12, 19, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grimsrud (US 6,546,437 B1) in view of Hosaka et al. (hereinafter Hosaka) (US 5,896,292) and further in view of Csipkes et al. (hereinafter Csipkes) (US 6,167,401).

19. Referring to claims 7 and 19, the references of Hosaka and Grimsrud both fail to explicitly teach the steps of:

- serializing the microdevices;
- maintaining a log of the serialized microdevices.

However, the reference of Csipkes teaches assigning items to serial numbers (“assign the new values as the current serial numbers”, col. 8, lines 6-9) and recording/maintaining the serial number of the items in a log or table (“tracking table identifies a type of product”, “serial number of a product”, “test files”, “automated manufacturing files”, col. 2, lines 21-29). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the features of serializing microdevices and maintaining them in a log to the existing method of Hosaka and Grimsrud for the reason of increasing control of the system by being able to keep track of each microdevice in the system and perform actions on particular devices (“*tracking table being used to link data contained in the action table*”, col. 2, lines 21-24).

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20. Referring to claims 12 and 24, Grimsrud fails to explicitly teach an administrator mode but Hosaka teaches the step of:

- providing an administrator mode (*"input/output units 703-706", col. 11, lines 4-10, and "program", "assigned", "data input", "computer", col. 4, lines 29-33).*

Grimsrud in view of Hosaka fails to explicitly teach the step of:

- protecting provisions of the operator mode using a password input in the administrator mode

However, the reference of Csipkes teaches logging into a manufacturing control network with a user ID and password ("user logs into the system at step 101", "user ID and password", col. 3, lines 42-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of a password input in the administrator mode to the existing method of Hosaka for the reason of increasing the security of the system.

Claims 8 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grimsrud (US 6,546,437 B1) in view of Hosaka et al. (US 5,896,292) (hereinafter Hosaka), and further in view of Grundy et al. (hereinafter Grundy) (US 5,224,055).

21. Referring to claim 8, Grimsrud teaches legacy and non-legacy processing but fails to explicitly teach:

- combining a plurality of tasks to define a kit
- performing the processing of a kit in the legacy processing system and the non-legacy processing system.

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However, Grundy teaches the use of a kit formed by tasks from a current mode logic process (*"kit", "formed", "current mode logic process", "set of instructions", "design of circuit is simplified", col. 2, lines 35-41*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of a kit to the existing method of Grimsrud for the reason of improving reliability by reducing error (*"kit", "reduces the scope for error", col. 2, lines 40-41*).

22. Referring to claim 20, it is rejected for the same reasons as stated in the rejection of claim 8.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (703) 305-5334. The examiner can normally be reached on 8:30AM - 7:00PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 746-7140.

Kt
1/25/04


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